

REMARKS

The allowance of claims 18-20 and 29 - 31 is noted with appreciation.

Claims 15, 39 and 40 have been rejected under 35 U.S.C. 112, first paragraph, as unsupported by the disclosure as to "what speed the invention can operate at".

Applicants would respectfully request reconsideration of this holding calling the attention of the Office to page 4 of the specification which states that more than 3000 bits of executable code per second are embedded in an MP3 audio file encoded at a bit-rate of 128,000 bits/sec. In Table 1, on page 17 of the application, achieved rates of "2800 bits/sec," "5600 bits/sec," and "11,200 bits/sec." are disclosed. These rates establish the range of 1000's of bits/second as claimed.

Claims 1-6, 8-11, 13, 15, 21, 22, 24-25, 32-33, 35 have been rejected under 35 U.S.C. 102 (e) as anticipated by the patent to Rhoads et al., 6,411,725. The Rhoads patent, however, only describes the encoding of "object specific information" into a video signal, and then associating that information with an action. The information they describe is merely short names or identifiers such as a URL (column 2, lines 31-33. 44-48) or a "short title or number" (column 7, line 12). The viewing system must then use an external network (column 14, lines 18-64) to retrieve additional information such as "still image, audio, or video content". Rhoads thus does *not* teach or anticipate the embedding of anything beyond a simple label in audio or video content. Although, in Rhoads, the action

performed in response to this label can include "executing a program," their program must be predefined and already stored on the playing device, prior to the media file being decoded.

In applicants' system, to the contrary, an entire new program can be placed directly in the media, removing the Rhoads significant limitation of only being able to use predefined actions.

In addition, applicants' system also removes the further significant limitation that Rhoads encounters when the content is used in a non-networked environment. Since their techniques, unlike applicants', do not teach the embedding of large amounts of data, but only the embedding of small amounts of data that are then used to query an external network, they are unable to be of any use in situations where people are using media files while disconnected from the network (e.g., walking around with an iPod). Since applicants' system teaches the embedding of large amounts of data, a novel and rich interactive experience can be provided to the viewer, even when offline.

Rhoads et al are, moreover, very concerned with *minimizing the size* of the data to be embedded -- a limitation which applicants do not encounter with their techniques; and they even try to avoid placing an entire web address in the data stream: "Most importantly, fewer bits need to be transmitted since only an ID and not the complete link are required" (col 17, lines 18-20).

In addition, Rhoads et al also discuss embedding these small tags into objects in a game (col 17, lines 59-61). This is in decided contrast to what applicants teach, which is the embedding of an *entire* game inside an audio file.

The patent to Rhoads et al also discusses (col 19, lines 26-30) adding links to advertisements in billboards in the video. As previously described, these are mere links to the advertisements, *not the advertisements themselves*, as applicants' system enables. Similarly, they describe the placement of a watermark (col 20, lines 26-29) "to allow the user to access the website" for the movie, and discuss watermarking clothing (col 20, lines 42-44) to link "to the page on the web site to buy the article".

These are all different from the techniques which applicants' technology allows, which is to embed the web sites and advertisements *directly*, without the necessity of the extra steps of querying an external server and downloading additional content from a web site.

Regarding the specific Office comments on Claims 4-6, 8, 10-11, 13, 21, 24, 25 & 35, Rhoads et al only describes the embedding of small identification codes in video or audio streams, *not* executable code in a "computer program format." In accordance with #114 in their Figure 1A, the box only describes a pre-programmed response to a simple identification code, such as a URL. They do *not* teach anything comparable to applicants' embedding of an entire computer program into a media file, as now claimed.

In particular, there is a major distinction between the small pieces of data that Rhoads et al consistently teaches placing in a media file, and what applicants teach: placing an entire executable program, which is several orders of magnitude larger. A small identifier such as a URL cannot be compared to the power of a complex executable program such as Java, Visual Basic, or Flash code, written in a Turing-complete language. Their system suffers from the burdensome limitation of only being able to encode small pieces of data, so it needs to be connected to a larger database and to download content over an external network, as shown in Figures 1B, 8 and 9, in order to be able to present any interesting content. This is because Rhoads et al does not solve the problem solved by applicants of embedding large, complex, interactive programs inside a media file.

As for Claims 22 & 33, applicants teach the use of their techniques in *combination* with the very different techniques employed in a typical robust watermarking process, such as that described in the Rhoads system. Based on applicants' different teachings, if their system is used to embed executable code into a media file that has already been watermarked, both sets of information are preserved, since they embed the data in fundamentally different ways that do not conflict.

Turning, now, to the 35 U.S.C. 103 (a) rejection of claims 7, 12, 14, 16, 17, 23, 27, 28 and 34 as the "obvious" incorporation in the Rhoads et al system of the advertising linking of the Ebisawa patent 6,539,544, neither Rhoads et al nor

Ebisawa teaches the embedding of games or advertising directly into the media. As mentioned previously, Rhoads et al only teach the embedding of a link to a web site that may contain ads. Ebisawa also does not teach the embedding of ads into the media. It only describes a system for the automatic downloading of advertisements into a game, and disabling that game if it is disconnected from the network that provides for the download. Both of these systems, moreover, do not work when disconnected from the network, which is a problem admirably solved by applicants' techniques.

It should also be noted that claims 16, 17, 27 & 28 do not describe what the examiner terms the "conversion from MPEG to MP3", but instead describe embedding data into a normal MPEG layer III file, commonly termed an mp3, which consists of a MPEG containing an mp3 audio stream. This is merely a way to accurately describe the embedding of data into an mp3.

Claims 23, 25, 26 & 34, furthermore, similarly define over any such proposed combination of the reference patents, since Ebisawa teaches only the downloading of advertising into a game, not anything even similar to applicants' technique of placing "transactional advertising, games, polls..." into a media file. These are two completely different operations.

Having shown in detail, above, that the cited references, singly or in combination, do not teach applicants' techniques or attain their novel results, it remains to examine whether applicants' claim language distinguishes over the references. Though applicants consider that they do -- as earlier explained -- in

order to make this even more evident-- applicants have amended all the claims specifically to make clear applicants' novel embedding of

"interactive and traditional advertising, merchandising materials, e-commerce solicitations and messages, polls, complete videogames, interactive music and audio/video programs, and complete computer programs",

impossible with the reference systems and precisely descriptive of applicants' achievement in the language earlier approved by the Office as of patentable weight in granting applicants' U.S. Patent 6,748,362 as definitive over such prior art.

Applicants agree with the Office that the Moniterio et al, Wolfe et al, Martin, and the patent to Washberg et al also do not anticipate the invention of this application.

Reconsideration and allowance of all the rejected claims therefore appear to be proper, and such action is respectfully requested.

Any costs required by this filing, including for any required reply time extensions, petition for which is hereby made, may be charged to Deposit Account No. 18-1425 of the undersigned attorneys.

Very respectfully,

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